

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0018] with the following amended paragraph:

[0018] In at least some embodiments of the invention the store controller may be located remote from the primary server 10, possibly in a retail store of any variety. In the exemplary case of utilizing the embodiments of the invention in a grocery store, the store controller 12 may be placed at an inconspicuous location within the grocery store. The store controller 12 ~~communicate, communicates~~, possibly wirelessly, with one or more advertising players 14 within the general vicinity of the store controller 12. In the exemplary case of a grocery store, a single store controller 12 may be in communication with a plurality of advertising players 14 at various locations throughout the store.

Please replace paragraph [0024] with the following amended paragraph:

[0024] The store controller 12 may manage communication between the server 10 and the one or more advertising players 14 for which it is responsible. FIG. 2 illustrates a store controller 12 constructed in accordance with at least some embodiments of the invention. The store controller 12 may comprise a processor 50 which may be any suitable microprocessor or microcontroller, but in at least some embodiments the processor 50 may be a microcontroller produced by Microchip having a part number 18F452, or a Atmel Corporation part number ATmega128. The processor 50 may couple to a radio transceiver 52. The radio transceiver 52 may be responsible for communicating with the one or more advertising players 14 in the region of the store controller 12. In at least some embodiments of the invention, the radio transceiver 52 may operate at 900 MHz, such as devices produced by MaxStream, Inc. of Orem, Utah, and Xemics USA Inc. of Mountain View, Calif. FIG. 2 also illustrates three possible systems to couple the store ~~transceiver 12 controller 12~~ to the communication system 11, though others may be possible. Thus, in some embodiments of the invention the store controller 12 may couple to the communication system 11 by way of a satellite transceiver 54. Many retail stores, such as grocery stores and possibly smaller convenience stores, operate their own dedicated satellite network. In these circumstances, the primary server 10 may be located at a central facility and may communicate with one or more store controllers 12 over a satellite system. In this exemplary case, the communication system 11 may thus be a satellite-based communication system. In alternative embodiments of the invention, the communication system 11 may be the Internet, and thus the store controller 12 may couple to the communication system 11 by way of a high bandwidth Internet connection 56, such as a digital subscriber line connection or possibly by way of a cable modem. In these circumstances, the processor 50 may communicate with the cable modem or DSL controller by way of a network controller 58. Though high bandwidth (and therefore higher speed) Internet connections may be desirable, various embodiments of the invention may still be operable even if the store controller 12 couples to the communication system 11 being Internet by way of a modem 60 and dial-up service 62. In accordance with at least some embodiments of the invention, communications between the controller 12 and the server 10 may use a TCP/IP connection across the communication system 11. The controller 12 may communicate with one or more advertising players 14 over a radio transceiver 52. Because the communication between the store controller 12 and the one or more advertising players 14 may be slower than the speed at which the store controller 12 communicates to the primary server 10 over the communication system 11, the store controller 12 may perform buffering and

spooling of the information to prevent data loss. For example, the wireless connection to each advertising player 14 may operate at 19,200 baud, whereas an exemplary DSL Internet connection may operate at 1 Mbit, and an exemplary dial-up connection may operate at 56,000 baud. The store controller 12 may periodically (e.g. approximately once each hour) test the wireless connection for the advertising player 14. Faulty advertising players 14 may be reported to the server 10.

Please replace paragraph [0027] with the following amended paragraph:

[0027] In order that the advertising player 14 may communicate with the store controller 12 and the primary server 10, a radio transceiver 24 may be coupled to the processor 18. The radio transceiver 24 may thus be responsible for forming at least part of the communication link between the advertisement player 14 and the primary server 10. The radio transceiver 24 may be a device manufactured by MaxStream having a part number X09-019NSI. In alternative embodiments, a communication system such as a network interface (not illustrated) may be used in addition to or in place of the radio transceiver. Such a network interface may allow the advertising playing to communicate over a hard-wired connection to the store controller 12, or the advertising player 14 may bypass the store controller 12 and communicate directly to the primary ~~computer~~ server 10.

Please replace paragraph [0028] with the following amended paragraph:

[0028] An advertising player 14 may also comprise a sensing device 26 coupled to the processor 18. As will be discussed more fully below, the sensing device 26, in its many possible forms, may be responsible for detecting the presence of a consumer proximate to the advertising player 14 and/or a product display with which a particular advertising player 14 is associated. The advertising player 14 may further comprise a video display [[24]] 34 coupled to the processor 18 by way of a video decoder 35. A video display may be the mechanism by which images (whether single images or moving video) may be displayed. The video display [[24]] 34 may take many possible forms, such as a cathode ray tube, an active-matrix flat panel display, or a liquid crystal (LCD) display. In at least some embodiments of the invention, the video display 24 may be a LCD manufactured by L. G. Philips having a part number LB070W02.

Please replace paragraph [0029] with the following amended paragraph:

[0029] The advertising player 14 may also comprise a communication device, such as a ~~speaker 26, speaker 27~~, coupled to the processor 18 by way of an audio voice encoder (vocoder) 28. The audio vocoder 28 and ~~speaker 26, speaker 27~~, may play audio advertisements alone, or as accompaniment to the pictures or video images on the video display[[24]] 34. The audio vocoder 28 may be a device in a chip set available from RC Systems of Everett, Wash., having a part number RC8650. This chip set may also comprise media storage 21, possibly a flash memory, in which digital versions of the advertisements may be stored. The processor 18, in combination with the RAM 20, media storage 21 and/or ROM 22, may store advertisements, possibly provided from the primary server 10 through the store controller 12 for play-back. The audio ~~driver~~ vocoder 28 may likewise have the capacity to store audio or audio versions of advertisements. Though the video decoder 35 and audio vocoder 28 are shown coupled to the

various memory devices (RAM, ROM and media storage) through the processor, each of the video decoder 35 and audio vocoder 28 may be capable of direct memory access, and thus in some embodiments may couple directly to the various memory devices.

Please replace paragraph [0032] with the following amended paragraph:

[0032] In the exemplary case of the advertising player 14 being placed within a freezer, the ~~sensing device (FIG. 2)~~ device 26 (FIG. 3) may be an ultrasonic sensor monitoring the status of the door. In these exemplary embodiments, when a consumer opens the freezer door, the ~~sensing device 36~~ device 26 may thus signal the processor 18 that a consumer has been detected. In accordance with embodiments of the invention, upon detecting of a consumer, the advertising player 14 selects one of its plurality of advertising messages, and displays that message on one or both of the video display and audio driver. The advertisement may take many forms, such as attempting to influence the purchaser to a particular brand or type of product within the freezer case. Alternatively, the advertisement may provide information relating to the products in proximity to the advertising player 14, such as nutritional information.